



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,732	08/31/2001	Kuang-Tse Chin	HSU-29	1344

23416 7590 01/22/2004
CONNOLLY BOVE LODGE & HUTZ, LLP
P O BOX 2207
WILMINGTON, DE 19899

EXAMINER

LUK, EMMANUEL S

ART UNIT	PAPER NUMBER
----------	--------------

1722

DATE MAILED: 01/22/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,732

Applicant(s)

CHIN, KUANG-TSE

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: In line 23, the claim incorrectly has a period resulting in the two periods in the claim. Appropriate correction is required.

Double Patenting

2. Claims 14-18 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 5-9. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 5-9 and 14-18 are dependent on claim 1. For expediency, examiner will assume that claims 15-18 are dependent on second set of claims.

Specification

3. The disclosure is objected to because of the following informalities:
On page 7, line 15, the term "inter" is misspelled, it should be --enter--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1722

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3, 5, 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 3 recites the limitation "conveying gear disk" in line 3. There is insufficient antecedent basis for this limitation in the claim. Independent claim 1 does not claim a gear disk and thus claim 3 fails to particularly point out the subject matter. However, there is a gear disk in claim 2.
- Claim 5 recites the limitation "rotary disk" in line 3. There is insufficient antecedent basis for this limitation in the claim. Independent claim 1 does not claim a rotary disk and thus claim 5 fails to particularly point out the subject matter. However there is a rotary disk in claim 2.
- Claim 12 recites the limitation "transmission gear disk" in line 4. There is insufficient antecedent basis for this limitation in the claim. Independent claim 10 does not claim a gear disk and thus claim 12 fails to particularly point out the subject matter. However, there is a gear disk in claim 11.
- Claim 14 recites the limitation "rotary disk" in line 3. There is insufficient antecedent basis for this limitation in the claim. Independent claims 1 and 10 do not claim a rotary disk and thus claim 14 fails to particularly point out the subject matter. However there is a rotary disk in claim 11.

Art Unit: 1722

6. Claims 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The corresponding claim 17 has the word "provides" in line 2. Claim 8 does not and is considered indefinite since the relation between the conveying mechanism and the plurality of stripping plates cannot be construed. Examiner will assume claim 8 reads the same as claim 17 for purposes of expediency. Appropriate corrections is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1722

9. Claims 1, 3, 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner et al (5326258) in view of Hagen (3479690).

Gittner teaches an apparatus for heating preform blanks, the preforms (1) are position in holders (3) on a conveyor (32) and the preforms are subjected to a series of heating and cooling stations (24). The temperature is controlled (Col. 8, lines 56-59) and thus allows for the desired crystallinity of the preforms, the preforms are removed via gripping means (Col. 11, line 13), or tongues (5), from the conveyor. A slant guide surface on the slide rail (160), a rotary disk is present (150) which contains a meshing part (150b).

Gittner fails to teach an input zone comprising of a shift device and positioning slide device, releasing zone and two parallel cycling conveyers.

Hagen teaches an apparatus for producing hollow plastic articles having two conveyers (14', 137) with a plurality of loaders (15a-15c), an input zone and releasing zone (Fig. 5) with shift device (150) and positioning slide rail (149) two cooling zones (73, 123) and means for interior cooling of the articles (Col. 15, lines 6-25). The orientation of the conveyers is merely a rearrangement of the conveyers for directing the articles to the desired location from the molding station. The shift during the heating and cooling of the preforms from one conveyor to the next would result with a heating zone located in the lower portion.

It would have been obvious to one of ordinary skill in the art to modify Gittner with the input and releasing zone and conveying means as taught by Hagen because it

Art Unit: 1722

allows for transfer of the preforms to different conveyors thereby increasing flexibility in the production line.

10. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krueger (2440959) in view of Gittner and Hagen.

Krueger teaches a rotary disk (66) having gaps (63) between teeth (66a) for locating articles, a central shaft (62) with transmission gear disk (78), a protect carrier (88) and the rotary disk having two connecting ends to connect with the feed element (see C3) and positioning slide rail (see C4), a single ascend wedge is disposed under the vertical disk with a tilt bottom (Fig. 3-7).

Krueger fails to teach a plurality of loaders, cycling conveyors, heater and cooling zones and multiple ascend wedges.

Gittner teaches an apparatus for heating preform blanks, the preforms (1) are position in holders (3) on a conveyor (32) and the preforms are subjected to a series of heating and cooling stations (24). The temperature is controlled (Col. 8, lines 56-59) and thus allows for the desired crystallinity of the preforms, the preforms are removed via gripping means (Col. 11, line 13), or tongues (5), from the conveyor. A slant guide surface on the slide rail (160), a rotary disk is present (150) which contains a meshing part (150b).

Hagen teaches an apparatus for producing hollow plastic articles having two conveyors (14', 137) with a plurality of loaders (15a-15c), an input zone and releasing zone (Fig. 5) with shift device (150) and positioning slide rail (149) two cooling zones

Art Unit: 1722

(73, 123) and means for interior cooling of the articles (Col. 15, lines 6-25). The orientation of the conveyors is merely a rearrangement of the conveyors for directing the articles to the desired location from the molding station. The shift during the heating and cooling of the preforms from one conveyor to the next would result with a heating zone located in the lower portion.

Krueger teaches a single ascend wedge and tilt bottom, this has the equivalent function as the multiple ascend wedges located under the disk. It would have been obvious to one of ordinary skill in the art to have multiple wedges and tilt bottoms for changing the position of the articles.

It would have been obvious to one of ordinary skill in the art to modify Krueger with the input and releasing zone and conveying means as taught by Hagen because it allows for transfer of the preforms to different conveyors thereby increasing flexibility in the production line and loaders and conveyors and heating and cooling zones as taught by Gittner because it would allow for curing of the articles while changing the position of the articles.

11. Claim 2 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner in view of Hagen as applied to claims 1, 3, 5-7 and 9 above, and further in view of Krueger (2440959).

Gittner fails to teach a rotary disk with gaps.

Krueger teaches a rotary disk (66) having gaps (63) between teeth (66a) for locating articles, a central shaft (62) with transmission gear disk (78), a protect carrier

(88) and the rotary disk having two connecting ends to connect with the feed element (see C3) and positioning slide rail (see C4), a single ascend wedge is disposed under the vertical disk with a tilt bottom (Fig. 3-7).

It would have been obvious to one of ordinary skill in the art to modify Gittner with the rotary disk as taught by Kruger for changing the position of the articles.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner in view of Hagen as applied to claims 1, 3, 5-7 and 9 above, and further in view of Wiatt (4382760).

Gittner fails to teach stripper plates.

Wiatt teaches preforms (20) being removed from sleeves and inserted into carriers (22) by transfer plate (604) and preform grasping jaws (612, 614) and the plates having a through hole (Fig. 7).

It would have been obvious to one of ordinary skill in the art to modify Gittner with plates as taught by Wiatt for removal of a plurality of articles simultaneously.

13. Claims 10, 12, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner in view of Hagen and Kieras et al.

Gittner teaches an apparatus for heating preform blanks, the preforms (1) are position in holders (3) on a conveyor (32) and the preforms are subjected to a series of heating and cooling stations (24). The temperature is controlled (Col. 8, lines 56-59) and thus allows for the desired crystallinity of the preforms, the preforms are removed

Art Unit: 1722

via gripping means (Col. 11, line 13), or tongues (5), from the conveyor. A slant guide surface on the slide rail (160), a rotary disk is present (150) which contains a meshing part (150b).

Gittner fails to teach an input zone comprising of a shift device and positioning slide device, releasing zone, two parallel cycling conveyers and infrared sensors to control the temperature loaders.

Hagen teaches an apparatus for producing hollow plastic articles having two conveyers (14', 137) with a plurality of loaders (15a-15c), an input zone and releasing zone (Fig. 5) with shift device (150) and positioning slide rail (149) two cooling zones (73, 123) and means for interior cooling of the articles (Col. 15, lines 6-25). The orientation of the conveyers is merely a rearrangement of the conveyers for directing the articles to the desired location from the molding station. The shift during the heating and cooling of the preforms from one conveyor to the next would result with a heating zone located in the lower portion.

Kieras et al teaches an apparatus having an indexing table with a plurality of mandrels for holding hollow thermoplastic articles that are moved to multiple heating stations. Kieras utilizes infrared sensors for detecting the temperature of the articles and the signals are imputed to the PLC device to control the temperature at the stations.

It would have been obvious to one of ordinary skill in the art to modify Gittner with the input and releasing zone and conveying means as taught by Hagen because it allows for transfer of the preforms to different conveyors thereby increasing flexibility in

Art Unit: 1722

the production line and the sensor and control system as taught by Kieras because it allows for controlling the article at a desired temperature.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner in view of Hagen and Kieras as applied to claims 10, 12, 14-16 and 18 above, and further in view of Krueger (2440959).

Gittner fails to teach a rotary disk with gaps.

Krueger teaches a rotary disk (66) having gaps (63) between teeth (66a) for locating articles, a central shaft (62) with transmission gear disk (78), a protect carrier (88) and the rotary disk having two connecting ends to connect with the feed element (see C3) and positioning slide rail (see C4), a single ascend wedge is disposed under the vertical disk with a tilt bottom (Fig. 3-7).

It would have been obvious to one of ordinary skill in the art to modify Gittner with the rotary disk as taught by Krueger for changing the position of the articles.

15. Claims 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krueger (2440959) in view of Gittner, Hagen and Kieras.

Krueger teaches a rotary disk (66) having gaps (63) between teeth (66a) for locating articles, a central shaft (62) with transmission gear disk (78), a protect carrier (88) and the rotary disk having two connecting ends to connect with the feed element (see C3) and positioning slide rail (see C4), a single ascend wedge is disposed under the vertical disk with a tilt bottom (Fig. 3-7).

Krueger fails to teach a plurality of loaders, cycling conveyors, heater and cooling zones infrared sensors to control the temperature loaders and multiple ascend wedges.

Gittner teaches an apparatus for heating preform blanks, the preforms (1) are position in holders (3) on a conveyor (32) and the preforms are subjected to a series of heating and cooling stations (24). The temperature is controlled (Col. 8, lines 56-59) and thus allows for the desired crystallinity of the preforms, the preforms are removed via gripping means (Col. 11, line 13), or tongues (5), from the conveyor. A slant guide surface on the slide rail (160), a rotary disk is present (150) which contains a meshing part (150b).

Hagen teaches an apparatus for producing hollow plastic articles having two conveyers (14', 137) with a plurality of loaders (15a-15c), an input zone and releasing zone (Fig. 5) with shift device (150) and positioning slide rail (149) two cooling zones (73, 123) and means for interior cooling of the articles (Col. 15, lines 6-25). The orientation of the conveyors is merely a rearrangement of the conveyors for directing the articles to the desired location from the molding station. The shift during the heating and cooling of the preforms from one conveyor to the next would result with a heating zone located in the lower portion.

Kieras et al teaches an apparatus having an indexing table with a plurality of mandrels for holding hollow thermoplastic articles that are moved to multiple heating stations. Kieras utilizes infrared sensors for detecting the temperature of the articles and the signals are imputed to the PLC device to control the temperature at the stations.

Krueger teaches a single ascend wedge and tilt bottom, this has the equivalent function as the multiple ascend wedges located under the disk. It would have been obvious to one of ordinary skill in the art to have multiple wedges and tilt bottoms for changing the position of the articles.

It would have been obvious to one of ordinary skill in the art to modify Kruger with loaders, conveyors and heating and cooling zones as taught by Gittner because it would allow for curing of the articles while changing the position of the articles, input and releasing zone and conveying means as taught by Hagen because it allows for transfer of the preforms to different conveyors thereby increasing flexibility in the production line and the sensor and control system as taught by Kieras because it allows for controlling the article at a desired temperature.

16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gittner in view of Hagen as applied to claims 10, 15, 16 and 18 above, and further in view of Wiatt (4382760).

Gittner fails to teach stripper plates.

Wiatt teaches preforms (20) being removed from sleeves and inserted into carriers (22) by transfer plate (604) and preform grasping jaws (612, 614) and the plates having a through hole (Fig. 7).

It would have been obvious to one of ordinary skill in the art to modify Gittner with plates as taught by Wiatt for removal of a plurality of articles simultaneously.

Art Unit: 1722

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takada et al and Kresak et al.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Thursday 7 to 4 and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

EL


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700